UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,074	06/25/2003	Robert S. Weiner	04615-0100 33,213	4253

3490 7590 02/12/2007

DOUGLAS T. JOHNSON
MILLER & MARTIN
1000 VOLUNTEER BUILDING
832 GEORGIA AVENUE
CHATTANOOGA, TN 37402-2289

EXAMINER	
STAICOVICI, STEFAN	
ART UNIT	**PAPER NUMBER**
1732	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/12/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/606,074	WEINER, ROBERT S.	
	Examiner	Art Unit	
	Stefan Staicovici	1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 December 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's response filed December 4, 2006 has been entered. Claims 1-20 are pending in the instant application.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-2, 11-13, 15-17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weiner *et al.* (US Patent No. 6,696,004 B1) in view of Lussi *et al.* (US Patent No. 5,015,516).

Weiner *et al.* ('004) teach the basic claimed process for making a vinyl sheet product including, placing a first vinyl layer onto a conveyor (20), imbedding a decorative mesh material (26) into said vinyl layer and curing said vinyl layer to form said vinyl sheet (see col. 7, lines 15-63).

Regarding claims 1, 15 and 19, although Weiner *et al.* ('004) teach a decorative mesh material, Weiner *et al.* ('004) do not teach a decorative material in the form of drips, streams, chips or pellets, specifically, PVC particles. However, the use of vinyl chips as a decorative material in making a vinyl sheet is well known as evidenced by Lussi *et al.* ('516) who teach a

process for making a decorative vinyl sheet including, embedding a plurality of PVC particles into a substrate to form a decorative layer (see col. 7, lines 10-62). Therefore, it would have been obvious for one of ordinary skill in the art to provide the PVC particles of Lussi *et al.* ('516) as a decorative material in the process of Weiner *et al.* ('004), because Lussi *et al.* ('516) teach that such particles provide for enhanced decorative characteristics, hence providing for an improved product due to aesthetic characteristics. Further, it is noted that because the PVC particles are much smaller than the vinyl layer, that said particles do not completely cover the surface of the conveyor.

Further regarding claim 1, Weiner *et al.* ('004) in view of Lussi *et al.* ('516) do not teach the claimed order of the process steps. However, whether the decorative particles are placed first on the conveyor and then the vinyl layer is applied or vice versa is obvious one over the other without any other evidence of unexpected results. Therefore, it would have been obvious for one of ordinary skill in the art to have reversed the order in the process of Weiner *et al.* ('004) in view of Lussi *et al.* ('516) due to a variety of known advantages such as optimum equipment set-up, reduced waste by improved thickness control of the vinyl layer and also because, whether the decorative PVC particles are placed first on the conveyor and then the vinyl layer is applied or vice versa results in the same laminate structure without any unexpected results.

In regard to claim 2, Weiner *et al.* ('004) teach imbedding a first decorative article (scrim) (26) into said vinyl layer.

Specifically regarding claims 11-12 and 16-17, Weiner *et al.* ('004) in view of Lussi *et al.* ('516) teach a first decorative material in the form of PVC particles and a second decorative material in the form of a metallic mesh (scrim).

Regarding claim 13, Weiner *et al.* ('004) teach an oven (24) for curing said vinyl laminate (see Figure 7) and then cooling in order to cut said laminate into tiles (see col. 2, lines 24-33).

4. Claims 3 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weiner *et al.* (US Patent No. 6,696,004 B1) in view of Lussi *et al.* (US Patent No. 5,015,516) and in further view of Weiner *et al.* (US Patent No. 6,903,033 B1).

Weiner *et al.* ('004) in view of Lussi *et al.* ('516) teach the basic claimed process as described above.

Regarding claims 3 and 18, Weiner *et al.* ('004) in view of Lussi *et al.* ('516) do not teach a second vinyl layer. Weiner *et al.* ('033) teach a process for making a vinyl sheet product including, embedding a mesh layer between first and second vinyl layers (see col. 2, lines 14-25). Therefore, it would have been obvious for one of ordinary skill in the art to provide a second vinyl layer as taught by Weiner *et al.* ('033) to the vinyl sheet product formed by the process of Weiner *et al.* ('004) in view of Lussi *et al.* ('516) because, Weiner *et al.* ('033) specifically teaches that a second vinyl layer provides for improved aesthetic characteristics, hence providing for an improved product.

5. Claims 4-5 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weiner *et al.* (US Patent No. 6,696,004 B1) in view of Lussi *et al.* (US Patent No. 5,015,516) and in further view of Erb (US Patent No. 3,350,483).

Weiner *et al.* ('004) in view of Lussi *et al.* ('516) teach the basic claimed process as described above.

Regarding claim 4, Weiner *et al.* ('004) in view of Lussi *et al.* ('516) do not teach a liquid design material. However, the use of liquid design material in making a vinyl sheet is well known as evidenced by Erb ('483) who teaches a process for making a decorative vinyl sheet by using a liquid design material (see col. 1, lines 45-58). Therefore, it would have been obvious for one of ordinary skill in the art to provide a liquid design material as taught by Erb ('483) to make the vinyl sheet in the process of Weiner *et al.* ('004) in view of Lussi *et al.* ('516) because Erb ('483) specifically teaches that a liquid design material provides for making a swirling pattern, hence providing for improved aesthetic characteristics.

In regard to claims 5 and 20, Erb ('483) teaches partially curing the liquid design material (col. 2, lines 59-63) and lateral motion of the liquid design material applicator device (col. 2, lines 35-47). Therefore, it would have been obvious for one of ordinary skill in the art to apply the liquid design material by a lateral motion and to partially cure said liquid design material as taught by Erb ('483) to make the vinyl sheet in the process of Weiner *et al.* ('004) in view of Lussi *et al.* ('516) because Erb ('483) specifically teaches that such procedures applied to the liquid design material provides for making a swirling pattern, hence providing for improved aesthetic characteristics.

6. Claims 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weiner *et al.* (US Patent No. 6,696,004 B1) in view of Lussi *et al.* (US Patent No. 5,015,516) and in further view of Erb (US Patent No. 3,350,483) and Hensler *et al.* (US Patent No. 5,695,696).

Weiner *et al.* ('004) in view of Lussi *et al.* ('516) and in further view of Erb ('483) teach the basic claimed process as described above.

Regarding claims 6-7, Weiner *et al.* ('004) in view of Lussi *et al.* ('516) and in further view of Erb ('483) do not teach a hopper having a plurality of orifices. Hensler *et al.* ('696) teach a process for making a vinyl sheet including, providing a hopper having a plurality of orifices that allows forming a vinyl sheet product having at least two colors (see col. 2, lines 28-52). Therefore, it would have been obvious for one of ordinary skill in the art to have provided a hopper having a plurality of orifices as taught by Hensler *et al.* ('696) in the process of Weiner *et al.* ('004) in view of Lussi *et al.* ('516) and in further view of Erb ('483) because, Hensler *et al.* ('696) teach that such a hopper allows forming a vinyl sheet product having at least two colors, hence providing for an improved product and also because Erb ('483) teaches a liquid design material feeding mechanism including a plurality of nozzles, hence suggesting a hopper having a plurality of orifices.

In regard to claims 8-9, although Weiner *et al.* ('004) in view of Lussi *et al.* ('516) and in further view of Erb ('483) and Hensler *et al.* ('696) teach a hopper, Weiner *et al.* ('004) in view of Lussi *et al.* ('516) and in further view of Erb ('483) and Hensler *et al.* ('696) do not teach a vibrating hopper. However, the use of a vibrating hopper is well known in the art. Hence, it would have been obvious for one of ordinary skill in the art to have provided a vibrating hopper

in the process of Weiner *et al.* ('004) in view of Lussi *et al.* ('516) and in further view of Erb ('483) and Hensler *et al.* ('696) because of known advantages such as a uniform distribution of vinyl material, hence providing for an improved product by having a more precise control of the product thickness and also because, Erb ('483) teaches applying a lateral motion to the liquid design material feeding mechanism, hence suggesting a vibrating hopper having a plurality of nozzles.

Specifically regarding claim 10, Weiner *et al.* ('004) in view of Lussi *et al.* ('516) and in further view of Erb ('483) do not teach embossing rollers. Hensler *et al.* ('696) teach a process for making a vinyl sheet including, providing embossing rollers (42, 44) that generate a desired surface texture (see col. 2, lines 44-50). Therefore, it would have been obvious for one of ordinary skill in the art to have provided embossing rollers as taught by Hensler *et al.* ('696) in the process of Weiner *et al.* ('004) in view of Lussi *et al.* ('516) and in further view of Erb ('483) because, Hensler *et al.* ('696) specifically teach embossing rollers that provide a desired texture, hence provide for an improved product.

7. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Weiner *et al.* (US Patent No. 6,696,004 B1) in view of Lussi *et al.* (US Patent No. 5,015,516) and in further view of Suzuki *et al.* (US Patent No. 6,589,631 B1).

Weiner *et al.* ('004) in view of Lussi *et al.* ('516) teach the basic claimed process as described above.

Regarding claims 14, Weiner *et al.* ('004) in view of Lussi *et al.* ('516) do not teach a conveyor belt having a varying texture that is transmitted to said vinyl sheet product. Suzuki *et*

al. ('631) teach a process for making vinyl floor covering including using a conveyor texture to transfer a desired pattern to said vinyl floor covering. Therefore, it would have been obvious for one of ordinary skill in the art to have provided a conveyor texture as taught by Suzuki *et al.* ('631) in the process of Weiner *et al.* ('004) in view of Lussi *et al.* ('516) because, Suzuki *et al.* ('631) teach that such a texture is transferred to the resulting vinyl floor covering, thereby providing an anti-skid surface, hence providing for an improved product.

Response to Arguments

8. Applicant's arguments filed December 4, 2006 have been considered.

9. In response to applicant's arguments against the teachings of Weiner *et al.* ('004) and Lussi *et al.* ('516) individually (see pages 2-3 of the response filed 12/4/2006), it is noted that one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See In re Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981) and In re Merck & Co., 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

10. Applicant argues that the prior art of record does not teach a first step of applying a design material onto a conveyor, and then in a second step, applying a vinyl substrate over the design material (see page 2 of the response filed 12/4/2006). However, as shown above, whether the decorative particles are placed first on the conveyor and then the vinyl layer is applied or vice versa is obvious one over the other without any other evidence of unexpected results. See MPEP §2144.04(IV)(C), citing, In re Burhans, 154 F.2d 690, 69 USPQ 330 (CCPA 1946) (selection of any order of performing process steps is prima facie obvious in the absence of new or

unexpected results). Therefore, it would have been obvious for one of ordinary skill in the art to have reversed the order in the process of Weiner *et al.* ('004) in view of Lussi *et al.* ('516) due to a variety of known advantages such as optimum equipment set-up, reduced waste by improved thickness control of the vinyl layer and also because, whether the decorative PVC particles are placed first on the conveyor and then the vinyl layer is applied or vice versa results in the same laminate structure without any unexpected results.

11. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning (see page 2 of the response filed 12/4/2006), it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See In re McLaughlin, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

12. Applicant argues that Lussi *et al.* ('516) does not teach design particles that are "at least partially imbedded into a portion of a substrate layer instead of being placed on top or within a separate layer" (see page 3 of the response filed 12/4/2006). However, "[t]he test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference.... Rather, the test is what the combined teachings of those references would have suggested to those of ordinary skill in the art." See MPEP §2145(III), citing, In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). In this case,

(a) the primary reference, Weiner *et al.* ('004), teach a process for making a vinyl sheet product including, placing a first vinyl layer onto a conveyor (20), imbedding a decorative mesh material (26) into said vinyl layer and curing said vinyl layer to form said vinyl sheet (see col. 7, lines 15-63). Further, Weiner *et al.* ('004) teach that said mesh material (26) is not fully embedded into said vinyl layer.

(b) the secondary reference, Lussi *et al.* ('516), teach that the use of vinyl chips as a decorative material in making a vinyl sheet is well known (see col. 7, lines 10-62).

Therefore, it would have been obvious for one of ordinary skill in the art to provide the PVC particles of Lussi *et al.* ('516) as a decorative material in the process of Weiner *et al.* ('004), because Lussi *et al.* ('516) teach that such particles provide for enhanced decorative characteristics, hence providing for an improved product due to aesthetic characteristics. Hence, it is submitted that a reading of Weiner *et al.* ('004) in view of Lussi *et al.* ('516) as a whole teaches partially embedding a decorative material, such as a mesh or PVC particles, into a vinyl layer.

Applicant argues that Hensler *et al.* ('696) "does not provide all the claim limitations even when taken together with the other references" (see page 4 of the response filed 12/4/2006). In response, it is noted that Hensler *et al.* ('696) was used to show a hopper having a plurality of orifices that allows forming a vinyl sheet product having at least two colors (see col. 2, lines 28-52) and embossing rollers (42, 44) that generate a desired surface texture (see col. 2, lines 44-50). It is noted that, "[t]he test for obviousness is what the combined teachings of the references would have suggested to one of ordinary skill in the art." MPEP §2143.01(II). In this case, it

would have been obvious for one of ordinary skill in the art to have provided a hopper having a plurality of orifices as taught by Hensler *et al.* ('696) in the process of Weiner *et al.* ('004) in view of Lussi *et al.* ('516) and in further view of Erb ('483) because, Hensler *et al.* ('696) teach that such a hopper allows forming a vinyl sheet product having at least two colors, hence providing for an improved product and also because Erb ('483) teaches a liquid design material feeding mechanism including a plurality of nozzles, hence suggesting a hopper having a plurality of orifices. Further, it would have been obvious for one of ordinary skill in the art to have provided embossing rollers as taught by Hensler *et al.* ('696) in the process of Weiner *et al.* ('004) in view of Lussi *et al.* ('516) and in further view of Erb ('483) because, Hensler *et al.* ('696) specifically teach embossing rollers that provide a desired texture, hence provide for an improved product.

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed; and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stefan Staicovici, Ph.D. whose telephone number is (571) 272-1208. The examiner can normally be reached on Monday-Friday 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson, can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Stefan Staicovici, PhD

Stefan Staicovici

Primary Examiner 2/7/07

AU 1732

February 7, 2007